

REPORT
ON THE
HEALTH OF THE BOROUGH
OF
BIRMINGHAM,

FOR THE YEAR 1874,

ALSO,

ON THE PROCEEDINGS TAKEN UNDER THE ACT FOR THE

PREVENTION OF ADULTERATION
OF ARTICLES OF FOOD AND DRINK,

BY

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and
Analyst to the Borough.*

PRINTED BY ORDER OF THE SANITARY COMMITTEE.

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MEDICAL OFFICER OF HEALTH'S DEPARTMENT,
PUBLIC OFFICE, BIRMINGHAM,
May 19th, 1875.

TO THE SANITARY COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I have the honor to lay before you my Second Annual Report for the Registration Year 1874, which consisted of 52 weeks, and ended Saturday, January 2nd, of the present year.

The population estimated to the middle of the year 1874 amounted to 360,892.

The total number of
BIRTHS

registered in the Borough during the year is 14,888, comprising 7,520 males and 7,368 females.

This total number is 391 higher than during the year 1873, which consisted of 53 weeks, the total then being 14,497, made up of 7,340 males and 7,157 females. These figures are seen to greater advantage in the tabular form, thus :—

1873.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	TOTAL.
Total ..	3,741	3,564	3,378	3,814	14,497
Males ..	1,892	1,783	1,715	1,950	7,340
Females ..	1,849	1,781	1,663	1,864	7,157
1874.					
Total ...	3,814	3,871	3,493	3,710	14,888
Males ...	1,953	1,961	1,753	1,853	7,520
Females ...	1,861	1,910	1,740	1,857	7,368

The Birth-rate for 1873 was 40·78 per 1,000 of the population ; in 1874 it had increased to 41·25 per 1,000 ; while the average for the ten years, 1865-74, was only 38·37 per 1,000.

The following are the Birth-rates of each year of the decade named :—

1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
38·87	38·48	38·01	36·31	35·53	35·00	39·00	40·50	40·78	41·25
Total average, 38·37.									

The above figures show that the Birth-rate has been becoming higher year by year since 1870, and is now not only higher than the average of the ten years, but also higher than in any year herein recorded. From the

statement below, it will also be seen that our birth-rate is this year higher than that of any of the undermentioned large towns, except Leeds.

London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	Average of 21 Large Towns.
35·8	31·8	41·3	39·0	39·4	41·6	41·0	37·3

This high Birth-rate is a satisfactory, because unfailing, indication of the prosperity of the town; and prosperity involves some of the principal conditions favourable to health.

DEATHS.

The Deaths registered in the Borough during the year number 9,665, consisting of 4,993 males, and 4,672 females. These 9,665 deaths, which are equal to an annual death rate of 26·78 per 1,000 persons living, contrast unfavourably with the number for the previous year, which was 8,990, giving a rate of 24·81 per 1,000 per annum. The following Table gives the total number of deaths, the number of each sex, and the death rate for each of the quarters of 1873 and 1874.

1873.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Total ...	2,198	1,931	2,235	2,626	8,990
Males ...	1,145	1,080	1,171	1,299	4,695
Females ...	1,053	851	1,064	1,327	4,295
Death-rate ...	24·74	21·73	25·15	27·43	24·81
1874.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Total ...	2,548	2,079	2,503	2,535	9,665
Males ...	1,297	1,111	1,273	1,312	4,993
Females ...	1,251	968	1,230	1,223	4,672
Death-rate ...	28·24	23·04	27·74	28·10	26·78

The deaths are distributed among the twelve Registration Sub-Districts as follows—

	Ladywood, (H.)	St. Thomas, (H.)	St. Martin.	St. Peter.	St. Philip.	St. Paul.	St. Mary.	St. George (H.)	All Saints' (W. L.)	Deritend.	Dudleston.	Edgbaston.
1st Quarter ...	251	214	201	76	34	51	114	393	403	408	328	75
2nd Quarter ...	222	218	172	81	31	45	96	293	266	312	283	60
3rd Quarter ...	299	242	199	97	42	67	93	388	359	334	323	60
4th Quarter ...	245	216	167	103	40	56	104	428	389	360	358	69
Total, 1874 ...	1,017	890	739	357	147	219	407	1,502	1,417	1,414	1,292	264
Total, 1873 ...	1,007	872	685	357	135	138	425	1,580	1,203	1,194	1,161	233

On comparing the totals for the two years it will be found that there is a rise in the number of deaths this year above that of 1873 in each of the Registration Sub-Districts, except those of St. George and St. Mary, in both of which there is a decline, and St. Peter, the number for which exactly corresponds with that in 1873. The increase is proportionately greatest in the

Sub-Districts of St. Paul, Deritend, All Saints', Edgbaston, and Duddeston, in the order named.

In the following Table is given the number of deaths at various ætal periods for each of the quarters of 1874, with the totals for that and the preceding year:—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total. 1874.	Total. 1873.
Under 1 year of age ...	618	539	873	658	2,688	2,627
Between 1 and 5 years of age	525	392	501	483	1,901	1,797
" 5 " 10 "	105	106	132	133	476	378
" 10 " 20 "	111	133	105	118	467	351
" 20 " 40 "	340	304	307	344	1,295	1,064
" 40 " 60 "	383	305	295	396	1,379	1,252
" 60 " 80 "	415	266	243	347	1,271	1,312
At 80 years and upwards	51	34	47	56	188	209

It is thus seen that the number of deaths in 1874 is higher than in 1873, at all the various ætal periods between one year and sixty years, and lower at the periods above sixty. The period which exhibits the greatest increase is that between ten and twenty years, the increase in this period being no less than 33 per cent. upon the number for last year, and is entirely due to the larger number of deaths from Small-Pox. The periods which show the next greatest increase are those between five and ten, and between twenty and forty; the rise being 26 per cent. and 22 per cent. respectively. In these periods the rise is also principally due to the much greater fatality from Small-Pox.

In the subjoined statement is given the death-rate per 1,000 of the population per annum for the past ten years—

1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
24·53	24·03	25·6	25·9	23·1	23·00	24·9	23·1	24·8	26·78

The above figures show that the death-rate for 1874 is no less than 2·45 per 1,000 higher than the average for the nine years 1865—73 inclusive, and that in no year of this period has it been so high, by so much as nearly 1·00 per 1,000, as in the present one.

A comparison of the death-rates of Birmingham and the principal large towns, is here given for the two past years. Death-rate per 1,000—

Average of 18 large towns.	London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	
1873.	24·05	22·45	21·57	24·8	25·9	30·17	27·55	29·9
1874.	25·0	22·6	23·6	26·8	32·1	30·5	28·8	29·3

The following are the percentages of deaths of infants under one year of age to births registered during 1874:—

Average of 18 large English towns.	London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	
1874.	17·5	15·6	17·8	17·8	23·3	19·7	19·9	19·8
1873.	17·4	16·0	16·1	18·15	21·3	20·0	19·4	18·7

The percentage of deaths of infants under one year of age on the total deaths is:—

Average of 18 large English towns.	London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	
1874.	26·4	24·9	24·0	27·8	28·2	25·4	28·8	27·5
1873.	27·02	25·25	24·5	29·2	30·42	25·75	28·0	27·1

Further and more detailed information upon the causes of death, ages at death, number of each sex, and distribution of the deaths among the Registration Sub-Districts will be found in Tables III. and VII. to XI. (inclusive).

METEOROLOGY.

The monthly statements in Table VII., compiled from the weekly ones, kindly supplied me by Mr. D. Smith, F.R.A.S., shew that the

Mean Temperature for the 1st Quarter was $41^{\circ}4$

"	"	"	2nd	"	$53^{\circ}2$
"	"	"	3rd	"	$59^{\circ}9$
"	"	"	4th	"	$41^{\circ}6$
"	"	"	Year 1874		$49^{\circ}02$
"	"	"	"	1873	$48^{\circ}61$

Compared with 1873, the 1st, 2nd, and 3rd quarters and the whole year were respectively $2^{\circ}4$, $1^{\circ}35$, $0^{\circ}74$, and $0^{\circ}41$ warmer; while the 4th quarter was as much as $3^{\circ}07$ colder.

This greater degree of cold in the fourth quarter made itself manifest in the increase of affections of the chest, particularly Bronchitis; thus largely contributing to the high death-rate, for the 4th quarter, of $28\cdot10$.

ZYMOTIC DISEASES.

The total deaths from the seven Zymotic diseases amount to 2,652, or 27·44 per cent. of the total number of deaths from all causes.

These 2,652 deaths are equal to an annual death-rate of $7\cdot35$ per 1,000 persons living, as compared with a rate of $5\cdot64$ in 1873, and $4\cdot5$, the average rate per 1,000 for 1873, in the eighteen large English towns.

Annual rate of mortality per 1,000 persons living from seven principal Zymotic diseases :—

Average 18 large English Towns.							
London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	
1873 3·95 ... 3·35 ... 2·17 ... 5·64 ... 3·92 ... 5·95 ... 5·66 ... 6·82							
1874 4·5 ... 3·3 ... 2·0 ... 7·35 ... 8·4 ... 5·5 ... 6·3 ... 5·5							

Percentage of Deaths from seven principal Zymotic diseases upon total Deaths :—

Average 18 large English Towns.							
London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	
1873 16·35 ... 14·87 ... 10·1 ... 23·85 ... 19·07 ... 19·75 ... 20·9 ... 22·6							
1874 18·0 ... 14·9 ... 9·0 ... 27·4 ... 25·2 ... 18·0 ... 22·0 ... 18·6							

The death rate per 1,000 from the class of disease most influenced by sanitary conditions is seen by the table to be $1\cdot71$ higher than last year, when it was already high, while the percentage of deaths from the same causes upon the total deaths is not only much higher than last year but is also higher than in any of the large towns in England. In 1873, its relative Zymotic mortality exceeded that of all the large towns, but this year it exceeds them to a still greater extent.

The following statement shews the number of deaths from seven Zymotic diseases, and the order of fatality of those diseases in the two years, 1873 and 1874.

	1873.	1874.
Diarrhoea	728	622
Scarlatina	587	737
Fever	203	201
Whooping Cough.....	169	242
Small-pox	125	637
Measles	123	139
Diphtheria	107	74
	2,042	2,652

Of the Zymotic diseases the one which has proved most fatal this year is Scarlatina ; it has supplanted Diarrhoea in order of fatality and occasioned no less than 737 deaths against 587 during the year 1873. In the 1st quarter it caused 140 deaths, in the 2nd, 138, in the 3rd, 241, and in the 4th, 218. The disease has been proportionately most fatal in the Registration Sub-Districts of Ladywood, St. Paul, St. George, and Duddeston.

The great difficulties in the way of diminishing the death-rate from Scarlatina are its intense infective power, general ignorance of the conditions which affect its spread, carelessness, and sometimes wilful exposure of persons and clothing which are infected. The association of children in schools is perhaps the principal means by which the poison is disseminated, and until parents are sufficiently educated on the question to observe the necessary precautions, it is to be feared that little can be done to control the ravages of this fatal scourge of infant life.

The following bill has been left at the houses of persons known to be suffering from Scarlatina :—

ADVICE ON THE PREVENTION AND MANAGEMENT OF SCARLET FEVER.

The Prevention of all Infectious Diseases is best secured by those things which are good for Health generally, such as GOOD FOOD, GOOD WATER, PURE AIR, CLEANLINESS, WARMTH, and DRYNESS.

Scarlet Fever or Scarlatina are one and the same thing, the disease is very infectious and dangerous ; mild cases very often end fatally because they are neglected ; they ought to be looked after with the same care as severe cases.

Mild cases are also as infectious as severe ones ; they ought, therefore, to be treated with every precaution, so as to prevent their spread.

Scarlet Fever patients should be kept away from the rest of the family, and be waited on by as few persons as possible.

The nose and mouth of the patient should be wiped with pieces of clean rag, to be burnt immediately after use.

The dust which peels from the patient's skin being highly contagious, anointing of the whole body with oil, simple or camphorated, is recommended to prevent its dispersion.

If the patient is kept at home, the Sick Room should be large, have a fire in it, and be *at all times* well ventilated.

Curtains, carpets, and all needless drapery should be removed from the room, which should be occupied only by the patient and the Nurse.

All Discharges from the patient should be received into vessels into which a Disinfectant has been put,—such as Chloride of Lime or Carbolate of Lime,—and not be left in the sick chamber.

All Bed and Body Linen, should before removal from the room, be placed in a tub or bucket containing a solution of Carbolic Acid (two or three tablespoonfuls of the acid to a gallon of water) ; and after removal from the room it should be boiled before being washed. The washing should be done at home. The removal of infected clothing is very dangerous, and is a punishable offence.

Bedding must be carefully disinfected. Straw mattresses are best, as they may be burnt after use. Disinfectants will be supplied free, instruction in their use given, and other assistance rendered by the Nuisance Inspector, on application.

When the patient is recovered sufficiently, cleanse and disinfect the surface of the body by a soap and warm water bath every day for three or four days.

Keep all the children of the family away from school until safety is certified by the Medical attendant. A breach of this injunction is punishable by a penalty of five pounds.

Nurses should be persons protected by a previous attack. They should wear cotton or linen clothes, which are easily washed. They should wash their hands often in water containing a little Carbolic acid of Lime, and then in plain water with soap.

They should avoid as much as possible ASSOCIATING with or visiting others, or being visited.

Gossiping between neighbours greatly spreads the disease.

THOROUGH CLEANLINESS is absolutely necessary. Sweepings should be burnt in the room.

After recovery, the sick room should be completely cleansed and disinfected by fumigation with sulphur, lime-washing, removal of wall paper, and washing of floors, &c., with a solution of Carbolic acid of Lime.

Help in the work of disinfection will be given where needed by the Sanitary Officers. Ventilation is a most valuable Disinfectant; if gradual and constant there is no danger in it. A good plan is to open the lower sash three or four inches, and place a piece of wood under its lower edge, so as to quite close the opening; ventilation then goes on between the upper and lower sashes where they overlap.

Pure Air being necessary, the drains, sinks, privies, &c., should be kept in good order, cleansed and regularly disinfected. In cases of difficulty or delay, such defects should be reported to the Inspector of Nuisances.

Drains should on no account be in direct communication with the insides of houses.

The exposure of Scarlet Fever patients in public places, the improper use of public carriages by persons suffering from the disease, the letting of infected houses or rooms, the exposure in any manner of infected articles, or the sending of children to school from infected rooms, subject the offender to heavy penalties.

Dead bodies, being centres of infection, should be buried early, and on no account be allowed to remain in rooms occupied by the living; a disinfectant (Carbolic acid of Lime) should be sprinkled in the coffin and over the body. Friends attending the funeral ought not to remain longer than necessary in the infected house.

In cases where the dead body must be in the same room with the living, application should be made to the Sanitary Department to take charge of the body until it can be buried.

It is requested that information of the existence of cases of Infectious Disease be forwarded early to either the Medical Officer of Health or the Inspector of Nuisances.

By Order of the Sanitary Committee,

ALFRED HILL, M.D.,

*Public Office,
January, 1875.*

Medical Officer of Health.

S M A L L - P O X

has been very much more prevalent than in any year since its outbreak in November, 1871.

It occupies this year the second place in order of fatality with 637 deaths. The cases reported this year amount to 3,791, of which 3,367 were described as vaccinated, 396 or 10·45 per cent. not vaccinated, and 28 doubtful cases. Last year the number of cases reported was 794, and of deaths 122, while in 1872 the number of cases and deaths was respectively 1,977 and 299. The largest number of cases reported in any week of the year was 136 in the week ended May 23rd the smallest 27, in the weeks ended Jan. 10th and Decem. 26th. The monthly numbers have ranged between 440 in June and 194 in February. The 637 deaths occurred in persons, 434 of whom were said to be vaccinated, 189 not vaccinated, and 14 in doubtful cases. The percentage of deaths to cases is 12·89 in those said to be vaccinated, 17·73 in those not vaccinated, and 16·80 in the total number. The percentage of total deaths to total cases is 1·44 higher than in 1873, when it was 15·36. The largest number of deaths from this cause has been registered in All Saints' (containing the Small-pox Infirmary) and in Derritend.

The Streets in which the largest number of cases and deaths from Small-pox have been reported during the year, are :—

Streets.	Cases.	Deaths.
New John Street West ...	65	5
Communication Row ...	40	14
Navigation Street ...	37	3
Glover Street ...	33	4
Farm Street ...	31	2
Cromwell Street ...	30	7
Dymoke Street ...	30	4
Upper Hospital Street ...	30	3
Garrison Lane ..	30	2
Lower Tower Street ...	29	7
Suffolk Street ...	28	5
Irving Street ...	28	4
Vaughton Street ...	27	6
Pritchett Street ...	26	1
Bordesley Street ...	25	5
Garbett Street ...	24	1
Cardigan Street ...	23	10
Chester Street (Ladywood) .	23	5
Spring Hill ...	23	4
Miller Street ...	23	2
Garrison Street ..	23	0
Brearley Street ...	22	5
Wharf Street (St. Thomas') ...	21	7
High Street (Deritend) ...	21	3
Summer Street (Edgbaston) ...	21	3
Unett Street ...	21	3
Saltley Road ...	19	3
Vauxhall Road ...	19	3
Great Francis Street ...	19	2
Holliday Street ..	17	8
Alecester Street ...	17	6

The cases of Small-pox since the first outbreak have fluctuated in number very considerably, a great diminution having occurred in the year 1873 ; during last year the numbers went up higher than ever, but showed a considerable decline in the 4th quarter ; these facts are seen in the table below, which gives all the cases and deaths recorded during the long period over which the epidemic has lasted.

Date—1871.	Cases.	Deaths.
November 18th to end of year.....	359	43
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1872.		
1st quarter	798	96
2nd quarter'.....	632	92
3rd quarter.....	355	67
4th quarter	192	44
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Total.....	1,977	299
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1873.		
1st quarter	171	29
2nd quarter	246	37
3rd quarter	124	18
4th quarter	253	38
<hr/>		
Total.....	794	122
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1874.		
1st quarter	757	123
2nd quarter	1,303	196
3rd quarter	1,059	165
4th quarter	672	153
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Total.....	3,791	637

making a total since 1871 of 6921 cases and 1,101 deaths.

The Small-pox Wards were transferred from the charge of the Guardians of the Poor to that of the Town Council on the 2nd November, 1874, and a special conveyance has been provided for the removal of persons affected with Small-pox who are willing to be isolated, and to receive the benefits offered in what is now the Borough Small-pox Hospital; these advantages are by no means small, everything having been done by your Committee to render the Hospital at once comfortable and efficient, and it is a matter of great importance that now no person need object to the Hospital on the ground that admission into it carries with it the taint of pauperism or any other disqualification.

The extent of the visitation from which the town has so long suffered, and continues to suffer, may be seen by the following statement, actual and comparative, of the

DEATH-RATE FROM SMALL-POX PER 100,000 OF THE POPULATION :—

Town.	Population.	Deaths from Small-pox in the Year 1874.	Rate per 100,000	
			In 1874.	In 1873.
London ..	3,400,701	56	1·6	3·4
Portsmouth ..	120,436	2	1·7	40·6
Norwich ..	82,257	—	0·0	1·2
Bristol ...	192,889	26	13·5	4·7
Wolverhampton	70,896	1	1·4	2·8
Birmingham ...	360,892	637	176·5	34·3
Leicester ...	106,202	—	0·0	2·0
Nottingham ...	90,894	—	0·0	0·0
Liverpool ...	510,640	30	5·9	2·0
Manchester ...	355,339	10	2·8	5·6
Salford ...	133,068	4	3·0	3·0
Oldham ...	86,281	1	1·2	1·2
Bradford ...	163,056	60	37·4	13·4
Leeds ...	278,798	34	12·2	41·1
Sheffield ...	261,029	1	0·4	2·0
Hull ...	130,996	3	2·3	20·3
Sunderland ...	104,378	—	0·0	1·0
Newcastle-on-Tyne	135,437	—	0·0	3·0

In 1873 the death-rate from the disease, though high, was exceeded by that of two towns—viz., Portsmouth and Leeds. The table shews that while the disease has almost entirely disappeared from Portsmouth and has very greatly diminished in Leeds, the Birmingham death-rate has increased five-fold, and is for 1874 enormously higher than that of any town in the kingdom. It will also be observed that upwards of 10 per cent. of the cases were unvaccinated, while last year (1873) nearly 10 per cent. of the cases occurred in unvaccinated persons. It is worthy of note too that while those patients described as vaccinated suffered a mortality of 12·89 per cent., the unvaccinated had a death-rate as high as 47·73 per cent., or nearly four times as great. The total death-rate from Small-pox last year was 15·36 per cent., while this year it is 16·80; in 1872 it was 15·12.

I remarked in my last report that this increase of the death-rate in 1873 was an unfavourable indication, and it has proved so; it is sincerely to be hoped that the still further increase of the death-rate in 1874 may not be followed by a still greater developement of the epidemic.

VACCINATION

still fails to reach a large proportion of the population, as is proved by the fact that 10·45 per cent. of the cases which occurred during the year were found to

be unvaccinated. It is remarkable that this proportion is nearly the same whether taken for the year 1874 or for the whole period since November, 1871, as during the latter term the percentage is 10·5.

Turning to the deaths in the year from Small-pox, I find that of these 30 per cent. are in persons who have not been vaccinated, and a comparison of the proportion for the year with that for the whole period since November, 1871, shews this proportion to be as invariable as it is in the cases, being 30·9.

As long as a considerable number of the population remain altogether unprotected by vaccination, it is vain to hope for the extinction of Small-pox; I have, however, so often brought this question before you that I simply now shortly refer to it, knowing that you have used every exertion to bring about a better state of things, though unhappily without success.

DIARRHœA,

which is accountable for 621 deaths, stands third in order of fatality; last year this disease proved the most fatal of the zymotics, the number of deaths from this cause being 728. As is usually the case, the bulk of the deaths occurred in the third or Summer quarter, when the death-rate from this disease alone was 5·3 per 1,000. During the other quarters the death-rate from this disease was much less, still the death-rate for the year bears the high ratio of 1·72 per 1,000, against 2·05 in the preceding year. A death from choleraic diarrhœa (classed under the cholera heading) occurred in All Saints Sub-district. Ladywood and St. George have experienced the greatest mortality from diarrhœa. The existence of the disease in Birmingham to so large an extent is a matter of great importance, and demands the most careful attention. A consideration of the natural conditions of the town leads to the conclusion that diarrhœa should exist to only a small extent. The town has an elevated position, roughly from 200 to 600 feet above the level of the sea, has a gravelly and sandy soil, and a surface so disposed as to favour rapid drainage. The social conditions appear no less favourable than the natural ones; the people are generally sufficiently fed, owing to trade being good, and there is very little of that factory labour so characteristic of some towns and which leads to the neglect of children, and the consequent production, among other diseases, of infantile diarrhœa.

WATER SUPPLY.

I cannot help thinking that our water supply is greatly instrumental in bringing about the present state of things. My analyses of the well waters of the town shew that they are greatly contaminated by Sewage matters largely of excrementitious origin, derived from drains, middens, cesspools, and general surface filth, and doubtless are often contaminated with the excretions of diarrhœa patients. No improvement in these wells can be expected until a proper plan of sewage and refuse disposal is carried out, or until the use of these wells is discontinued.

The Waterworks water is much better than that of the town wells in most respects, but I regard the organic impurities of this supply as much too high, and as very probably productive of diarrhœa. In Table XIV. are given the analytical results of my analysis of both classes of water during the year.

After Diarrhœa in order of fatality come Whooping Cough with 242 deaths against 169 in 1873; Fever (typhus, enteric or typhoid, and simple continued) with 201 against 203; Measles, 139 against 123, and Diphtheria, 74 deaths against 107.

At the request of your Committee I drew up and caused to be distributed to houses where Fever was ascertained to exist the following handbill :—

ADVICE ON THE PREVENTION AND MANAGEMENT OF FEVER.

The Prevention of all Infectious Diseases is best secured by those things which are good for health generally, such as *Good Food, Good Water, Pure Air, Cleanliness, Warmth, and Dryness.*

Fever (called sometimes Typhoid, Enteric, and Gastric), is found to infect chiefly through the discharges, which should therefore be received into vessels containing a Disinfectant, and not be left in the sick chamber.

A good Disinfectant for the purpose is carbolate of lime or carbolic acid water, made by dissolving a quarter of a pint of strong carbolic acid in a gallon of water. A teacupful of this should be placed in the pan before it is used, and another teacupful afterwards.

Another good disinfectant is green vitriol water, made by dissolving a pound of the Vitriol in a gallon of water, half a pint of it should be placed in the pan before and after use.

The discharges should on no account be thrown upon the surface of the ground or into common privies or middens. Drinking water tainted with such discharges is highly fatal. In every case where the drinking water is suspected of being impure, the portion used each day should be first well boiled. The patient's linen as soon as removed and before being taken from the room, should be disinfected by being placed in a bucket of boiling water; when cold, the linen may be removed and put into carbolic acid water of the above strength, and allowed to remain incit for an hour before being finally washed.

The washing should be done at home.

The removal of infected clothing is very dangerous, and is a punishable offence.

If the patient is kept at home, the sick room should be large, have a fire in it, and be *at all times* well ventilated.

Curtains, carpets, and all needless drapery should be removed from the room, which should only be occupied by the patient and the nurse.

Bedding must be carefully disinfected. Straw mattresses are best, as they may be burnt after use. Disinfectants will be supplied free, instruction in their use given, and other assistance rendered by the Nuisance Inspector, on application.

Nurses should wear cotton or linen clothes, which are easily washed. They should wash their hands often in water containing a little carbolite of lime, and then in plain water with soap.

THOROUGH CLEANLINESS is absolutely necessary. Sweepings should be burnt in the room.

After recovery, the sick room should be completely cleansed and disinfected by fumigation with sulphur, lime-washing, removal of wall paper, and washing of floors, &c., with a solution of carbolite of lime.

Help in the work of disinfection will be given where needed by the Sanitary Officers. Ventilation is a most valuable disinfectant: if gradual and constant there is no danger in it. A good plan is to open the lower sash three or four inches, and place a piece of wood under its lower edge, so as quite to close the opening: ventilation then goes on between the upper and lower sashes where they overlap.

Pure air being necessary, the drains, sinks, privies, &c., should be kept in good order, cleansed and regularly disinfected. In cases of difficulty or delay, such defects should be reported to the Inspector of Nuisances.

Drains should on no account be in direct communication with the insides of houses.

Allow no accumulations of decaying or refuse matter in the neighbourhood of dwellings. Much that is thrown out of houses might be advantageously disposed of by being thrown behind the fire.

Dead bodies, being centres of infection, should be buried early, and on no account be allowed to remain in rooms occupied by the living; a disinfectant (carbolite of lime) should be sprinkled in the coffin and over the body. Friends attending the funeral ought not to remain longer than necessary in the infected house.

In cases where the dead body must be in the same room with the living, application should be made to the Sanitary Department to remove the body at once to the Mortuary, at the Borough Cemetery, until it can be buried.

It is requested that information of the existence of cases of infectious disease be forwarded early to either the Medical Officer of Health or Inspector of Nuisances.

By order of the Sanitary Committee,

ALFRED HILL, M.D.,

Medical Officer of Health.

Also the following more comprehensive bill to be used principally in the form of posters in Courts, &c., for general guidance in the management of Zymotic disease.

BOROUGH OF BIRMINGHAM.

INFECTIOUS DISEASES such as Small-pox, Scarlatina, Diarrhoea, Fever, cause about ONE out of FOUR of all the Deaths in Birmingham.

Prevention of them is best secured by all those things which are good for Health generally, such as Good Food, Good Water, Pure Air, Cleanliness, Warmth, and Dryness.

Ventilate your dwellings by opening windows at the top during some hours of every day.

Temperance in eating and in drinking, and exercise.

In all cases of illness obtain Medical assistance without delay.

SMALL POX.—Have your Children Vaccinated early, and after the age of twelve years have them re-Vaccinated.

Small-pox patients should be kept separate from the rest of the family, and attended to by as few persons as practicable. This separation or isolation is sometimes impossible in small or crowded houses; in such cases the patient should be removed at the earliest moment, to the Small-pox Hospital, where the most efficient treatment and the greatest kindness are received. Removal to the Hospital is recommended in all cases.

A Conveyance is provided free of cost.

CLEANLINESS is absolutely necessary.

Nurses should be persons protected by a previous attack or by vaccination. They should wear linen or cotton clothes, which are easily washed. They should wash their hands frequently in water containing a little Carbolic Acid or Carbolic Lime, and then in plain water with soap.

They should avoid as much as possible associating with or visiting others.

The Sick Room should be well Ventilated, and divested of all unnecessary drapery, such as curtains and carpets. All bed and body-linen should, *before removal from the room*, be placed in water containing Carbolic Acid or Carbolic Lime, and, after removal, in boiling water.

All Discharges from the patients should be received directly into vessels containing a disinfectant—Carbolic or Chloride of Lime—and not allowed to remain in the sick chamber.

DRAINS, SINKS, PRIVIES, etc., should be kept in good order, cleansed, and regularly disinfected. In cases of difficulty or delay, such defects should be reported to the Inspector of Nuisances.

Drains should not be in direct communication with the insides of houses.

After recovery, the sick room should be thoroughly cleansed and disinfected by fumigation with sulphur, lime-washing, removal of wall paper, and washing of floors, &c., with a solution of carbolic acid.

Bedding must be carefully disinfected. Disinfectants will be supplied, instruction in their use given, and other assistance rendered by the Nuisance Inspector, on application.

The exposure of Small-pox patients in public places, the improper use of public carriages by persons suffering from Small-pox, the letting of infected houses or rooms, or the exposure in any manner of infected articles, subject the offender to heavy penalties.

Dead bodies, being centres of infection, should be buried early, and on no account be allowed to remain in rooms occupied by the living.

Information of the existence of cases of Small-pox should be forwarded early to either the Medical Officer of Health or the Inspector of Nuisances.

SCARLATINA.—In addition to the precautions named under Small-pox, let the patient wipe his nose and mouth on pieces of clean rag, to be burnt immediately after use.

The dust which peels from the patient's skin being highly contagious, anointing of the whole body with oil, simple or camphorated, is recommended to prevent its dispersion.

When recovered sufficiently, cleanse and disinfect the surface of the body by a soap and warm water bath every day for three or four days.

Keep all children of the family away from school until safety is certified by the Medical attendant; a breach of this injunction is punishable by a penalty of five pounds.

All infected clothing should be washed at home, its transmission is very dangerous and is a punishable offence.

FEVER (Typhoid, Enteric, or Gastric) is found to infect chiefly through the discharges, which should therefore be received in vessels containing a disinfectant. Such discharges should on no account be thrown upon the surface of the ground or into common

privies or middens. Drinking water tainted with such discharges is highly fatal. The patient's linen should be disinfected, and boiled or scalded before being washed.

DIARRHOEA.—To prevent Diarrhoea, observe temperance in eating and drinking.

Avoid improper and unwholesome food, such as tainted meat or fish and unsound or unripe fruit. As the majority of deaths occur in infants, the greatest care should be taken in feeding them. Young infants should be suckled or fed with sweetened milk, either with or without the addition of water.

Drink no water which is muddy or offensive, or under suspicion of contamination by surface impurities; where there is no choice, a suspected water should be boiled and allowed to cool before use as a drink; water so prepared should not be used for a longer time than one day.

Avoid exposure to great direct sun heat, sudden changes of temperature, and excessive fatigue.

Allow no accumulations of decaying or refuse matter in the neighbourhood of dwellings. Much that is thrown out of houses might be advantageously disposed of by being thrown behind the fire.

Practise personal and domestic cleanliness and free ventilation of houses, by opening windows and doors during certain parts of the day.

Disinfect immediately all discharges from patients.

WHERE THE DISEASE IS PRESENT.

Apply *at once* for medical assistance to a legally qualified medical man. Proper treatment at the outset is of the greatest importance; delay is highly dangerous. In the mean time, keep warm and quiet, best of all by going to bed.

Avoid ordinary animal and vegetable food, and adopt a milk diet.

If these directions are followed, the attack will in almost every case prove slight and easily managed; if neglected, it may assume the Choleraic type, and in every case prove highly dangerous or even fatal.

ALFRED HILL, M.D.,

December, 1874.

Medical Officer of Health.

The undermentioned Streets have furnished the largest number of deaths from Zymotic disease:—

STREETS.							No. of Deaths from Zymotic disease.
Farm Street	...	...	...	...	...	...	28
Brearley Street	...	...	...	...	...	...	23
New John Street West	...	...	...	...	...	...	22
Icknield Port Road	..	...	...	...	...	...	21
Bellbarn Road	..	...	...	...	...	...	19
Camden Street	...	...	...	...	...	...	19
William Street (St. Thomas')	...	...	...	...	...	...	18
Hope Street (St. Martin's)	...	...	...	...	...	...	17
Lower Tower Street	...	...	...	...	...	...	17
Cromwell Street	...	...	...	...	...	...	16
Lodge Road	...	...	...	...	...	...	16
Cardigan Street	...	...	...	...	...	...	15
Communication Row	...	...	...	...	...	...	15
Dymoke Street	...	...	...	...	...	...	15
New John Street	...	...	...	...	...	...	15
Watery Lane	...	...	...	...	...	...	15
Great Lister Street	...	...	...	...	...	...	14
Newtown Row	...	...	...	...	...	...	14
Sherlock Street	...	...	...	...	...	...	14

The fact of the existence of so much Zymotic disease possesses an importance which ought not to be disregarded. It points to the existence of conditions widespread and eminently unfavourable to health, and to the pressing necessity for the speedy adoption of measures for their removal or improvement. Such conditions operate not only in producing a high death-rate, but also an

enormous amount of unrecognised sickness, attended with great suffering and followed by debility, poverty, social degeneracy and public expense. These conditions are not the creation of to-day, they have been spreading and intensifying for many generations, and it stands to reason that only by active, well-directed, and sustained effort, can any substantial improvement be hoped for. Such measures, of course, require time for their execution, after which I venture to predict that Birmingham will begin to resume that favourable sanitary status to which its natural advantages entitle it. It is therefore a matter of congratulation to the town that the sanitary authority, the Town Council, by its action and that of your own and other Committees is fully bent on a policy of sanitary improvement. The task to be performed is as gigantic as it is necessary, wise and beneficent, and this is an additional reason for no longer delaying it. With thoroughly sewered, well-made, clean streets, properly drained premises, well constructed houses, having a thorough draught and a certain minimum of space, plentiful and pure water supply and proper hospital accommodation, the town cannot fail to improve in health, wealth, and happiness, and to receive more than an equivalent for any money outlay which it may judiciously make.

HOSPITAL FOR INFECTIOUS DISEASES.

In November the transfer of the Small-pox Wards to the Town Council as the Sanitary Authority was effected, and thus a beginning was made of what is now called the Borough Hospital. It has since been determined to increase the number of buildings, so as to provide a couple of Wards for the treatment of Scarlet Fever in both males and females. These buildings will be soon completed, and it is much to be hoped that the public will avail themselves of the excellent arrangements provided for the isolation and treatment of cases of this very infectious and prevalent disease. The beginning is a modest one, and may be regarded as largely experimental, but it will be a matter for surprise if, when the public perceives the advantage of such an institution, it should not be in great request, and soon require extension.

The increase this year of the already large mortality from Zymotic diseases shews the necessity that exists for such a Hospital.

HOUSE CONSTRUCTION AND VENTILATION

are matters which have not yet received the attention their great importance demands. It is very desirable that steps be taken as soon as possible to prevent the crowding together of houses on too small an area, and their construction on principles having disregard of a sufficiency of air and light. The Sanitary Census recently taken conclusively proves the necessity for the application of Bye-laws bearing on these matters.

Out of 70,500 houses inspected in the Borough, nearly 20,000 were found with windows not admitting of being opened at the top, thus rendering proper ventilation impossible.

Another and still more vicious structural defect is that of building houses back to back, or without back-doors. Such forms of construction have led to the most serious consequences to the health of towns, and to enormous expense for the removal of the defects, as in Liverpool and Glasgow. It is clearly the duty, therefore, of every town to see that such a state of things is not perpetuated.

SEWAGE AND REFUSE DISPOSAL,

is not in the satisfactory state that could be desired. The length of the streets in the Borough is 190 miles, 46 of which have not been "taken to" by the Corporation, while the length of the sewers is only about 130 miles. It

cannot be doubted that the absence of sewers in so large a portion of the town has had the effect of injuring the public health. There is, however, thanks to the Court of Chancery, a relaxation of the stringent orders which forbade the further sewerage of the town; and the construction of the much required sewers cannot fail to be a sanitary advantage. Considerable attention has been given to the modification of old ash-pits and privies, and among the alterations made 3,845 paus had by the end of the year been introduced in place of the foul old-fashioned privies. Much complaint has been made of the difficulty of getting ash-pits emptied, but, as you are aware, it has arisen from various causes, among which are principally the severe weather, accompanied by snow, and the impossibility of obtaining the required number of men and horses. Accumulations of such matters are highly objectionable and prejudicial, but every effort, I believe, is being made to surmount the difficulties of the case and it may be anticipated that they will shortly be successful.

THE PAVING

of a town exerts so great an influence, both physical and moral, on the condition of the inhabitants, that the commencement lately made to lay down permanent pavement must be considered a matter for real congratulation. In wet weather the street mud alone is a depressing agent, but it is in addition a medium of cold and disease; and when dried by the wind and sun, the filthy irritating dust into which it becomes changed is scarcely more acceptable or harmless.

Of the 190 miles of streets within the Borough only four miles at present are paved, but eleven miles are about to be taken in hand, and when completed, the result must inevitably *pro tanto* prove very satisfactory in a sanitary as well as in a general sense.

SANITARY WORK

has been carried out during the year with all the activity possible, and with a judicious regard to and preference for the most pressing and necessary requirements. It includes the inspection and improvement of the condition of comts, dwelling houses, lodging-houses, slaughter-houses, bakehouses, the quality of meat and other food, and the regulation of smoke from factory chimneys. A statement of the work done will be found in Table VI. As the work of the sanitary department has developed itself, the necessity for more inspectorial power has become evident, and it is therefore at present a question of making considerable additions to the staff. It must be patent to the most casual observer that a numerous staff of inspectors is required, in order to look properly after the comfort and health of 400,000 persons, and it is only by such increase that anything like efficient work in the direction of sanitary improvement can be accomplished.

The Slaughter-houses of the Borough are very numerous, exactly the same in number as last year, viz., 301. I consider it very desirable that private Slaughter-houses should be diminished, and should gradually give way to the introduction of public Slaughter-houses, the advantages of which I set forth in my last Annual Report.

The Lodging-houses continue to receive proper attention, and are consequently distinguished from private houses of a similar class by a far higher condition of health.

Houses let in Lodgings, as well as Common Lodging-houses are now placed under the supervision of the Corporation, the Bye-Laws for their regulation having been confirmed by the Local Government Board. When the preliminary business of measurement, registration, and other necessary arrangements shall have been completed, this class of Lodging-houses will be raised to the enjoyment of the sanitary advantages which distinguish the Common Lodging-houses, and made infinitely cleaner, more comfortable, and more healthy than they have been hitherto.

I beg to take this opportunity of thanking your Committee for the courtesy, kindness, and support extended to me in the performance of my duties during the past year, and of acknowledging the willing and valuable aid which I have received from the officers generally.

I have the honor to remain,

Gentlemen,

Your obedient Servant,

ALFRED HILL, M.D.,

Medical Officer of Health.

TABLE I.

POPULATION, INHABITED HOUSES, BIRTHS, AND DEATHS (GROSS NUMBERS).

Population estimated at the Middle of the Year 1874, 360, 892.	Number of Inhabited Houses in Borough.	BIRTHS.	DEATHS.
1874 360,892		14,888	9,665
1873		14,497	8,990
1872		14,123	8,048
1871	68,532	13,443	8,594
1870		12,922	7,805
1869		12,779	7,737
1868		12,992	8,548
1867		13,029	8,318
1866		12,877	8,042
1865		12,699	8,014
Average of Nine Years, 1865—1873 }		13,262	8,233

NOTES.

1.—Population at Census, 1871, 343,787.

2.—Area in Acres, 7840.

3.—Average Number of Persons in each House, at Census 1871, about 4·4.

TABLE II.

ANNUAL RATE OF MORTALITY, DEATH RATES AMONG CHILDREN, AND DEATHS IN PUBLIC INSTITUTIONS

DATE.	Annual rate of Mortality per 1,000 Living.	Deaths of Children under 1 year; percentage to total Deaths.	Percentage of Deaths of Children under 1 year to Registered Births.	Death of Children under 5 years; percentage to total Deaths.	Percentage of Deaths in Public Institutions.
1874	26.8	27.8	17.8	47.5	11.8
1873	24.8	29.2	18.1	49.2	11.6
1872	23.1	29.1	16.6	46.0	12.0
1871	24.9	29.7	19.0	49.0	10.9
1870	23.0	29.9	18.1	47.5	11.4
1869	23.1				
1868	25.9				
1867	25.6				
1866	24.03				
1865	24.53				
Average of 9 years 1865—1873	24.34				

DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM,

During the Year ending JANUARY 2nd, 1873.

ESTIMATED POPULATION OF THE MIDDLE OF THE YEAR 1874—360,892.

Estimated for the Borough's rate

Middle of the year 1874.

Hall III

CLASS I.—Zymotic Diseases.

Order 1.—Miasma.

1. Smallpox (Not Vaccinated)

2. Measles

3. Diphtheria

4. Quiinsy

5. Whooping Cough

6. Grippe

7. Typhus or Typhoid Fever

8. Simple or Combined Fever

9. Febrile Paroxysms (Malaria)

10. Carbuncle

11. Infuenza.

12. Dysentery.

13. Diarrhoea.

14. Cholera.

15. Ague.

16. Rheumatism.

17. Benignant Fever.

18. Other Zymotic Diseases.

19. Other Zymotic Diseases.

20. Purpura and Scurvy.

21. Diphtheria, &c., &c.

22. Alecholsian (& b.) Intemperance.

23. Hydrocephalus (Water on the Brain).

24. Glaucoma.

Order 2.—Diseases of the Skin.

1. Syphilis.

2. Scurf of Urethra.

3. Hydrocephalus.

4. Glaucoma.

Order 3.—Diseases of the Eye.

1. Gout.

2. Want of Breast Milk.

3. Purpura and Scurvy.

4. Alecholsian (& b.) Intemperance.

Order 4.—Parasitic.

1. Trichina.

2. Worms, &c.

Order 5.—Diseases of the Nervous System.

1. Cephalitis.

2. Apoplexy.

3. Paralysis.

4. Insanity.

5. Morbidity.

Order 6.—Tuberculosis.

1. Consumption.

2. Bronchitis.

3. Pleurisy.

4. Pneumonia.

5. Asthma.

6. Lung Disease, &c., &c.

Order 7.—Local Diseases.

1. Gastritis.

2. Enteritis.

3. Peritonitis.

4. Appendicitis.

5. Phlebitis.

6. Hemorrhoids.

7. Inflammation of the Intestines.

8. Inflammation of the Bowels.

9. Stricture of the Bowels.

10. Fistula.

11. Stomach Disease, &c.

12. Pancreas Disease, &c.

13. Hypertrophy.

14. Jaundice.

15. Liver Disease, &c., &c.

16. Spleen Disease, &c., &c.

Order 8.—Urinary Organs.

1. Nephritis.

2. Ischaemia.

3. Nephritis Bright's Disease.

4. Diabetes.

5. Stone.

6. Cystitis.

7. Kidney Disease.

8. Inflammation of the Bladder.

9. Stricture of the Bladder.

10. Fistula.

11. Stomach Disease, &c.

12. Pancreas Disease, &c.

13. Hypertrophy.

14. Jaundice.

15. Liver Disease, &c., &c.

16. Spleen Disease, &c., &c.

Order 9.—Developmental Diseases.

1. Diseases of Childhood.

2. Cyanosis.

3. Spina Bifida.

4. Other Malformations.

5. Fistula.

6. Suturing.

7. Otherwise.

Order 10.—Diseases of Old People.

1. Old Age.

Order 11.—Diseases of Nutrition.

1. Starvation.

2. Ulcer.

3. Skin Disease, &c.

4. Atrophy and Debility.

Order 12.—Violent Deaths.

1. Accidents or Negligence.

2. Fractures and Contusions.

3. Wounds, Cut, Stab.

4. Burns or Scalds.

5. Poison.

6. Drowning.

7. Hanging.

8. Violent Deaths (not classified).

Sudden Deaths (not classified).

Causes not specified or ill defined.

Total.

The Total of Deaths.

1922.

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1920.

1919.

1918.

1917.

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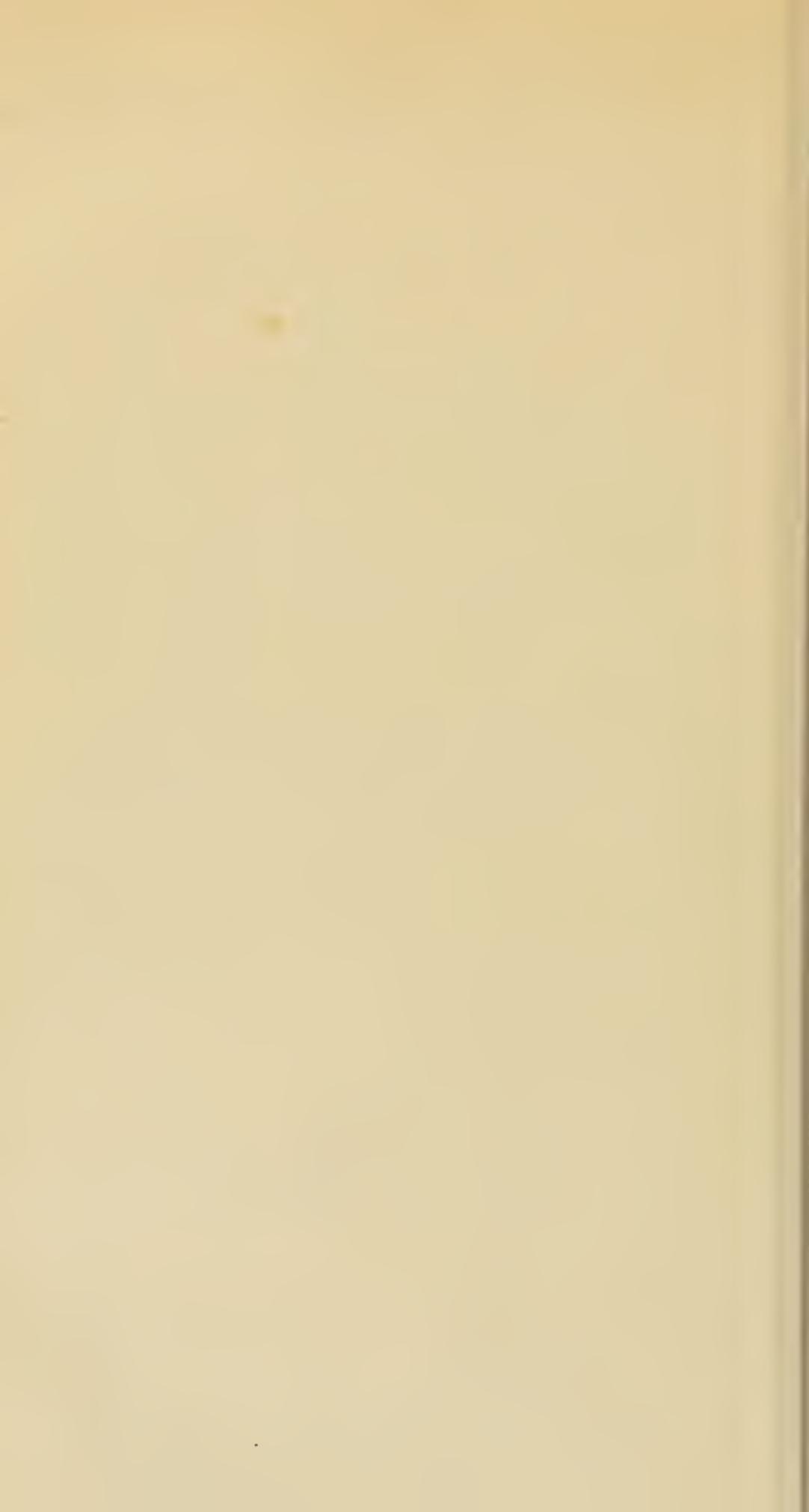
1822.

1821.

1820.

1819.

1818.



DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM,

**ESTIMATED POPULATION OF THE BONONIAN IN THE
MIDDLE OF THE YEAR 1874 - 360,892.**

ESTIMATED POPULATION OF THE BONNELL IN THE
YEAR 1874 360,892.

During the Quarter ending October 3rd, 1874.

During the Quarter ending October 3rd, 1874.

THE
ESTIMATED POPULATION
OF EACH OF THE REGISTRAR'S SUB-DISTRICTS.
A.O.E.S.

DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM,

DUR
**EST MATED POPULATION OF THE BOROUGH IN THE
YEAR 1874-5.**

During the Quarter ending January 2nd, 1873.

During the Quarter ending January 2nd, 1878.

During the Quarter ending January 2nd, 1873.

TABLE XII.

METEOROLOGICAL CONDITION OF THE AIR, AND AMOUNT OF RAINFALL FOR YEAR ENDING JANUARY 2ND, 1875,

Observed at 63, Bloomsbury Street, Birmingham, at 8.0 a.m., by
D. SMITH, Esq., F.R.A.S.

The Instruments are considered to be 340 feet above the mean level of the sea.

From the returns of the Registrar-General, the area within the Municipal Boundary of the Borough of Birmingham is taken at 8,400 acres, and the Population, estimated to the middle of the year 1875, at 360,892.

1874. Months	Pressure of Air. Barometer	TEMPERATURE OF THE AIR				RAINFALL.		
		Reading of Thermometer.				Depth of Rain depo- sited upon a square foot of sur- face, in inches and parts.	Measur- ment converted into weight per Acre.	Number of Days on which Rain fell, when $\frac{1}{10}$ ths of an inch or more was measured.
		Mean Weekly. Reading (corrected and reduced to 32 degrees Fahrenheit)	Highest in Shade.	Lowest in Shade.	Range of Temp- erature in the Week.			
		In Parts.	Dg. Prts.	Dg. Prts.	Dg. Prts.	Dg. Prts.	In. Parts.	Tons.
January (4 weeks)	29·668	53°·0	29°·5	23°·5	41°·4	1·86	188	10
February (")	29·602	53·4	21·2	32·2	38·2	2·685	270	9
March (5 weeks)	29·714	65·0	22·3	42·7	44·6	1·72	173	16
April (4 weeks)	29·564	75·0	32·3	42·7	50·5	1·45	147	5
May (")	29·598	67·6	33·2	34·4	50·5	3·24	326	7
June (5 weeks)	29·713	80·6	42·0	38·6	58·5	1·13	113	5
July (4 weeks)	29·539	85·3	48·3	37·0	64·0	1·26	127	8
August (")	29·553	82·0	44·6	37·4	60·1	1·985	202	14
Sept. (5 weeks)	29·448	74·0	40·2	33·8	56·4	4·545	459	19
October (4 weeks)	29·479	63·0	39·0	24·0	51·2	2·71	273	12
Nov. (")	29·643	58·3	23·3	35·0	41·6	1·45	146	10
Dec. (5 weeks)	29·352	51·0	17·0	34·0	33·9	4·375	441	16

The highest Mean Monthly Reading of the Barometer was in March ; the lowest in December. The highest Reading of the Thermometer in the shade, viz. 85°·3, was registered in the week ending July 11 ; the lowest, viz. 17°·0, in the week ending January 2nd, 1875.

The Mean Monthly Temperature ranged between 64°·0 in July and 33·9 in December.

September and December had the largest Rainfall ; June and July the smallest. Rain fell on 19 days in September, and on 5 in both April and June.

TABLE XIII.

NEW CASES OF DISEASE COMING UNDER TREATMENT DURING THE YEAR ENDING
JANUARY 2ND, 1875, AT THE FOLLOWING INSTITUTIONS, &c.

DISEASES.	I. General Hospital.	II. General Dispensary.	III. Queen's Hospital.	IV. Children's Hospital.	V. The Work-house.	VI. Out-door Pauper Patients.	TOTAL.
Small Pox	11	37	6	5	1,087	377	1,532
Measles	4	37	4	7	45	129	246
Scarlet Fever	25	63	29	220	52	278	667
Diphtheria	1	2	...	8	1	34	46
Whooping Cough ...	9	49	...	949	87	110	1,204
Croup	10	..	...	9	..	58	77
Diarrhœa	430	200	743	1,048	81	485	3,347
Dysentery	5	...	3	11	..	4	23
Asiatic Cholera .....	...	...	..	..	..	..	..
Erysipelas	16	43	17	25	64	35	200
Continued Fever.....	4	..	4	..	1	331	340
Typhus .....	...	..	...	..	..	..	..
Typhoid	8	25	14	83	8	7	145
Relapsing .....	...	...	...	..	..	..	..
Febricula	33	101	37	290	36	589	1,086
Ague	1	..	..	1	1	..	3
Rheumatic Fever ...	65	35	86	18	20	3	227
Puerperal Fever .....	..	..	2	..	..	1	3
Bronchitis & Catarrh	564	1,956	842	1,231	299	1,950	6,842
Influenza .....	..	11	..	..	..	..	11
Pleurisy & Pneumonia	153	61	102	59	29	55	459
Phthisis	445	1,632	570	163	133	190	3,133
Constl. Syphilis	189	220	147	473	217	152	1,398
All other Diseases ...	10,549	6,937	4,500	7,692	2,247	3,768	35,693
Accidents..	9,277	53	4,269	28	26	114	13,717
Totals	10,549	11,462	11,375	12,700	4,434	8,670	70,360

The above Returns are made by—I. PHILIP BINDLEY, Esq.—II. R. W. EDGINGTON, Esq.—III. J. B. SMITH, Esq.—IV. JNO. JOHNSTON, Esq., M.B.—V. A. B. SIMPSON, Esq.—VI. W. G. COULTON, Esq., Clerk to the Guardians.

TABLE XIV.

WATER SUPPLY—RESULTS OF ANALYSIS EXPRESSED IN PARTS PER 100,000.

1874 Date of Receipt of Sample.	DESCRIPTION. BIRMINGHAM WATERWORKS SUPPLY.	Tempera- C.	Total Solid Impurity	Organic Carbon.	Organic Nitrogen.	Ammonia	Nitrogen as Nitrates and Nitriles.	Total Combined Nitrogen.	Previous Sewage or Animal Contain- ation (Estnd.)	Chlorine.	Hardness.			REMARKS.
											Tempo- rary.	Perman- ent.	Total.	
Jan. 7th	4 Court, Norfolk Street	5°.0	27·40	.203	.042	.002	.379	.422	3480	1·73	6°.6	9°.6	16°.2	Pretty clear
Feb. 6th	2 Court, Nelson Street	5°.0	23·80	.086	.024	.002	.271	.296	2411	1·74	5°.6	10°.0	15°.6	Pretty clear
March 6th	Back 28 Glebe St. (St. Luke's) ...	7°.8	24·00	.248	.029	.002	.316	.346	2850	2·08	4°.3	11°.8	16°.1	Slightly turbid
April 7th	Montpellier Place, Kyrwick's Lane	7°.2	19·60	.179	.043	0·0	.304	.347	2720	2·08	5°.0	10°.7	15°.7	Do.
May 6th	93 Lawley Street	11°.7	22·24	.316	.064	.004	.194	.261	1659	1·74	4°.3	9°.1	13°.4	Very turbid
June 5th	Rear of 5, Wrottesley Street	18°.3	21·60	.239	.057	.002	.214	.273	1840	2·02	6°.2	9°.3	15°.5	Do.
July 6th	23 Watery Lane	16°.6	17·30	.299	.061	.003	.161	.224	1310	1·69	1°.8	12°.0	13°.8	Pretty clear, brownish green tinge
Aug. 1st	2 Court, Russell Street	18°.9	21·30	.224	.083	.003	.161	.246	1310	2·02	5°.0	9°.3	14°.3	Slightly turbid
Sep. 7th	Rear of 49 & 50, Icknield St. East	15°.0	21·08	.132	.102	.002	.220	.323	1890	2·02	6°.6	8°.7	15°.3	Pretty clear
Oct. 7th	Rear of 30 Fazeley Street	12°.8	31·00	.368	.091	.002	.082	.175	520	2·02	10°.7	19°.0	29°.7	Do.
Nov. 6th	19 Millward Street, Small Heath ...	11°.1	23·74	.220	.097	.002	.120	.218	900	2·02	5°.1	12°.6	17°.7	Rather turbid
Dec. 7th	31 Bloomsbury Street	5°.0	23·14	.249	.099	.002	.025	.125	0	1·69	4°.5	11°.8	16°.3	Pretty clear
WELL WATERS.														
Jan. 12th	105, St. Luke's Road (Typhoid) ...	48·0	...	...	.004	0·605	0·608	5760	7·62	...	...	...	...	Slightly turbid
" 21st	18 Court, Tower St. (Scarlatina) ...	158·0	...	...	.006	9·68	9·685	96500	29·50	...	...	...	...	Turbid
Feb. 9th	114, Spring Hill (Typhoid) ...	149·0	...	...	...	340	4·73	5·01	49780	28·37	...	...	...	Turbid
" 17th	7 Court, Conybere St. (Typhoid) ...	114·0	...	...	...	.008	1·98	1·986	19540	8·68	...	...	...	Turbid
" 25th	14 Court, Bordesley Street ...	199·0	...	...	...	.010	0·00	0·000	0	25·02	...	...	...	Turbid
Mar. 12th	3 Court, Bellbarn Rd. (Small-pox) ...	195·5	...	...	...	.004	7·70	7·703	7670	18·75	...	...	...
" 18th	Sherborne Street (Small-pox) ...	138·2	...	...	...	.004	7·04	7·043	70100	23·61	...	...	...
April 1st	132, Mosley Road (Typhoid) ...	162·4	...	...	...	.0	2·64	2·64	26100	21·75	...	...	...
" 14th	47, Little Barr Street (Typhoid) ...	242·2	...	...	...	.0	4·84	4·84	48000	38·65	...	...	...	Turbid
	Terrace, Spring Vale, Miles Street (Typhoid) ...	98·0	...	...	...	.004	1·50	1·503	16500	4·17	...	...	...
May 7th	35, Willis Street (Scarlatina) ...	192·0	...	...	...	.002	9·68	9·68	96500	22·23	...	...	...
July 2nd	31 Court, Hope Street (Scarlatina) ...	207·0	...	...	...	.004	6·40	6·403	64000	22·30	...	...	...
Oct. 22nd	Golden Hillock Road	69·0	...	...	...	.024	0·05	0·070	380	7·44	...	...	...	Very turbid Very turbid, colour dark, colour like decaying organic matter
" "	68, Upper Hospital Street (Typhoid and Small-pox) ...	281·0	...	...	...	.096	9·80	9·879	98470	27·03	...	...	...	Slightly turbid
" "	22, High Park Street, Nechells (Typhoid) ...	111·7	...	...	...	.006	3·10	3·150	31180	16·89	...	...	...	Slightly turbid
" "	Railway Terrace, Nechells	130·5	...	...	...	.004	5·70	5·703	56700	15·54	...	...	...	Pretty clear
Nov. 4th	102, Summer Street, Edgbaston (Scarlatina) ...	119·6	...	...	...	.030	3·40	3·424	33920	14·18	...	...	...	Pretty clear
" "	Spring Vale, Miles Street (Typhoid) ...	257·5	...	...	...	.042	10·32	10·354	103220	16·22	...	...	...	Pretty clear
" 24th	9 Court, St. George Street	121·0	...	...	...	2·000	0	0	16150	15·28	...	...	...	Very turbid
" "	10 Court, ditto	117·0	...	...	...	.001	9·12	9·120	90880	15·54	...	...	...	Clear
" 27th	Abbey Place, Ford Street (Small-pox) ...	117·5	...	...	...	.0	1·50	1·500	14680	16·22	...	...	...	Do. boils dirty Slightly turbid

Table of the Number of Deaths occurring in each Street in the Borough of Birmingham during the Year 1874.

STREETS.	Zymotic Disease	Other Diseases	STREETS.	Zymotic Disease	Other Diseases	STREETS.	Zymotic Disease	Other Diseases
A								
Abberley Street ..	..		Birchall Street ..	2	3	Chapel Street ..	5	6
Abbey Street ..	1	2	Bird Lane ..	..	3	Chapman Road ..	1	4
Aberdeen Street (1)	3	16	Bishopgate Street ..	6	20	Charles Arthur Street ..	2	11
A. B. Row ..	..	3	Bishop St., St. Martin's ..	2	15	Charles Henry Street ..	7	27
Adam Street ..	4	9	Bishop Street, St. Mary's ..	..		Charlotte Road ..	..
Adderley Street ..	5	13	Bishop Street South ..	..	11	Charlotte Street ..	3	13
Adelaide Street, Deritend	2	9	Bissell Street ..	..	5	Chattaway Street ..	..
Adelaide St., Duddeston	1	2	Blake Lane ..	(1)	5	Cheapside ..	(1)	11
Albert Street, Deritend ..	2	2	Blew's Street ..	..	9	Cheatham Street ..	..	2
Albert Street, All Saints' ..	2	4	Blew's Street West ..	..	2	Chequer's Walk ..	..	4
Albert Street, St. Peter's ..	..		Bloomsbury ..	..	5	Cherry Street ..	..	3
Albion Street ..	2	4	Bloomsbury Street ..	..	4	Cherry Wood Lane ..	..
Alcester Street ..	12	20	Blucher Street ..	(1)	4	Chester St., Ladywood (2) ..	8	18
Alexandra Road ..	..		Bolton Street ..	..	1	Chester St., Duddeston ..	2	4
Alexandra Street ..	..	3	Bond Street ..	..	2	Cheston Road ..	..
Alfred Street ..	..		Bordesley Green ..	..	1	Christ Church Passage ..	..
Allecock Street ..	..	2	Bordesley Green Road ..	..		Church Road, Duddeston ..	..	5
Allesley Street ..	..	2	Bordesley Park Road ..	..	3	Church Road, Edgbaston ..	1	2
Allison Street (1)	7	23	Bordesley Street ..	(1)	7	Church Street ..	..	5
All Saints' Street (1)	3	3	Bow Street ..	..	2	Clarendon Road ..	..	12
Alma Crescent ..	..	1	Bowyer Street ..	..	2	Clark Street ..	..	7
Alma Street ..	..		Bracebridge Street ..	..	2	Claverdon Street ..	..	8
Alston Street ..	..	1	Bradford Street ..	..	4	Claybrook Street ..	..	3
Ampton Street ..	..		Braithwaite Road ..	..	2	Clement Street ..	(2)	1
Anderton Road ..	..	6	Branston Street ..	..	1	Clevé Terrace ..	..	9
Anderton Street ..	1	1	Brasshouse Passage ..	..	2	Clissold Street ..	(1)	2
Andover Street ..	..		Brass Street ..	..	1	Cliveland Street ..	(1)	3
Angelina Street ..	2	14	Bread Lane ..	..		Coach Yard ..	..	1
Ann Street ..	..		Bread Street, St. Paul's ..	2	8	Coleman Street ..	..	8
Argyle Street ..	1	1	Bread Street, St. Martin's ..	..		Coleshill Street ..	(1)	4
Armoury Road ..	..		Brearley Street (3) ..	23	24	College Street ..	..	16
Arsenal Street ..	2	2	Brearley Street West (1) ..	5	18	Colmore Row ..	..	10
Arthur Road ..	..		Brewery St., Deritend ..	..		Commercial Street ..	..	1
Arthur Street ..	..	9	Brewery St., St. Mary's ..	..		Communication Row (5) ..	15	9
Ashton Row ..	10	13	Brewery St., Duddeston ..	8	6	Congreve Street ..	..
Aston Brook Street ..	1		Bricklin Street ..	..	1	Constitution Hill ..	..	14
Aston Road ..	..	6	Bridge Poad ..	..		Conybrye Street ..	..	12
Aston Street ..	..	1	Bridge street, Duddeston ..	..		Cope Street ..	..	4
Asylum Road ..	..	1	Bridge Street, St. Thomas's ..	..	2	Coplow Street ..	..	3
Augusta Street ..	..	1	Bridge Street West (2) ..	9	33	Cotton Row ..	..	3
Augustus Road ..	..	1	Bristol Road ..	..	3	Cotton Street ..	..
Austin Street ..	..	2	Bristol Street ..	..	9	Coventry Road ..	..	40
Avenue Road ..	..	1	Broad Street ..	..	14	Coventry Street ..	(1)	11
B								
Bacchus Road ..	..	1	Bromsgrove Street ..	..	6	Cox Street ..	..	7
Bagot Street ..	(3)	4	Brookfield Road ..	..		Coxwell Road ..	..	2
Bailey Street ..	..	1	Brook Road ..	..		Crabtree Road ..	..	2
Baker Street ..	..	2	Brook Street ..	..		Cranemore Street ..	..
Balloon Street ..	..	6	Broom Street ..	..	2	Cregoe Street ..	..	15
Balsall Heath Road ..	2		Brunton's Walk ..	..		Crescent ..	..	8
Balsall Street ..	..	4	Buckingham Street (1) ..	7	14	Creseent Wharf ..	..
Banbury Street ..	..	1	Buck Street ..	..	5	Cromwell Street ..	..	44
Barford Street ..	..	9	Bullock Road ..	..		Crooked Lane ..	..
Barford Street South ..	..	27	Bullock Street ..	..	1	Cross Street ..	(1)	5
Barker Street ..	..	3	Bull Ring ..	..		Cuckoo Road ..	..	2
Barlow's Road ..	..	1	Bull Street ..	..	5	Cumberland Street ..	..	4
Barn Street ..	..	2	Bury Street ..	..	3	Curzon Street ..	..	4
Barrack Street ..	..	4	Butler Street ..	..	1	Cuthbert Road ..	..	2
Barr Street ..	..	5	Calthorpe Road ..	..	2	C		
Barr Street West ..	..	12	Cambridge Crescent ..	..	3	Dale End ..	..	10
Bartholomew Row ..	..	6	Cambridge Street (1) ..	..	2	Dartmouth Street ..	..	28
Bartholomew Street (1)	..	7	Can Camden Drive ..	..		Darwin Street ..	..	25
Baskerville Passage ..	..	15	Can Camden Grove ..	..		Dawson Street ..	..	3
Baskerville Place ..	..		Can Camden Street ..	..	19	Dean Street ..	..	4
Bath Passage ..	..		Camp Hill ..	..	11	Derby Street ..	..	3
Bath Row ..	..	4	Camp Street ..	..	2	Devon Street ..	..	6
Bath Street ..	2)	10	Canal Street ..	..	3	Devonshire Street ..	..	2
Beach Street ..	..	5	Cannon Street ..	..	1	Digbeth ..	(1)	13
Beak Street ..	..	1	Cape Lane ..	..		Digby Street ..	..	1
Bear Lane ..	..	4	Cape Street ..	..	1	Doe Street ..	..	4
Beatrice Crescent ..	..	1	Cardigan Street ..	..	15	Dolman Street ..	..	6
Beaufort Road ..	..	2	Carlisle Street ..	..	8	Drury Lane ..	..
Bedford Road ..	..	2	Caroline Street ..	..	2	Duchess Road ..	..	1
Belgrave Road ..	(1)	2	Carpenter Road ..	..	1	Duddeston Mill Road ..	..	12
Bell Barn Road ..	(2)	19	Carr's Lane ..	..	1	Duddeston Row ..	(1)	5
Bellis Street ..	..	1	Cartland Road ..	..	1	Dudley Road ..	(1)	13
Bell Street ..	..	4	Carver Street ..	..	11	Dudley Street ..	..	2
Belmont Passage ..	..	1	Castle Street, St. Peter's ..	..	1	Dugdale Street ..	..	3
Belmont Row ..	..	3	Castle Street, Deritend ..	..		Duke Street ..	..	8
Benaere Street ..	..	5	Cathcart Street ..	..	2	Dymoke Street ..	..	12
Bennett's Hill ..	..	20	Cato Street ..	..	10	D		
Berkeley Street ..	..	2	Cato Street North ..	..	8	Dale End ..	..
Berner's Street ..	(1)	1	Cattell Road ..	..	17	Dartmouth Street ..	..	28
Beswick Street ..	..	2	Cattell Grove ..	..	6	Darwin Street ..	..	25
Betholom Row ..	..	1	Cecil Street (1) ..	..	3	Dawson Street ..	..	3
E								
Bernard Street ..	..		Centre Row ..	..		Dean Street ..	..	2
Betholom Row ..	..	4	Chad Road ..	..	1	Derby Street ..	..	3
Betholom Row ..	..	1	Chapel House Street ..	..	2	Devon Street ..	..	6

STREETS.				STREETS.				STREETS.			
	Zymotic Disease	Other Diseases			Zymotic Disease	Other Diseases			Zymotic Disease	Other Diseases	
Edgbaston Street	5	10		Green Lane	..	..	11	15	J		
Edmund Street	1	2		Green's Court	..	..	1	3	Jamaica Row	..	
Edward Road	7	16		Green Street, Deritend	..	..	5	5	James Street	..	1
Edward Street (1)	7	16		Green Street, All Saints'	..	..	11	15	Jenkin's Street	..	3
Elkington Street	2	9		Green's Village	..	..	2	2	Jennen's Row	..	1
Ellen Street	3	7		Greenway Street	..	..	11	15	Johnson Street	..	5
Ellis Street (1)		2		Grindstone Road	..	..			Johnstone Street	..	2
Elvetham Road	4	14		Grosvenor Row	..	..			John Street (4)	..	14
Emily Street				Grosvenor Street	..	..			K		
Emmeline Street				Grosvenor Street West	..	..	3	18	Keeley Street	..	3
Enfield Road				Guest Street	..	..	1	4	Kelynge Street	..	2
Engine Street		2		Guildford Street (1)	..	..	1	11	Kendall Street	..	6
Ernest Street				Gullet, St. Mary's	..	..			Kent Street	..	12
Essex Street		3		Gullet, Deritend	..	..			Kent Street North	..	6
Essington Street	3	10		Gullet, St. Thomas's	..	..			Kenyon Street	..	11
Exeter Row	1	8		H					Key Hill	..	7
Eyre Street	1	6		Hagley Road	..	..	3	12	King Alfred's Place	..	1
F				Hall Hill Road	..	..	3	4	King Edward's Place	..	2
Factory Road		1		Hall Street	..	..	7	13	King Edward's Road(1)	..	7
Falconer Road		1		Hampton Street	..	..			Kingston Road	..	6
Farm Road				Hampton Row	..	..	7		King Street	..	1
farm Street (2)	28	46		Handsworth New Road	..	..			Kyrwick's Lane	..	10
Fawdry Street				Hanley Street	..	..	3	10	L		
Fazeley Street	1	15		Harborne Road	..	..	5		Ladypool Lane	..	2
Fisher Street (2)		7		Harding St., St. George's	..	..	13	20	Ladywell Passage	..	1
Fleet Street	8	16		Harding Street, All Saints'	..	..			Ladywell Walk	..	13
Floodgate Street	4	13		Harford Street(1)	..	..	4		Ladywood Road	..	5
Florence Street	1	3		Harrison's Road	..	..			Ladywood Grove	..	18
Fordrough Lane				Hatchett Street	..	..	4	16	Lancaster Street	..	22
Fordrough Street (1)	6	11		Hawkes Street	..	..	4	5	Lander Street	..	1
Ford Street (1)	2	9		Heath Mill Lane	..	..	4	17	Langley Road	..	2
Forge Street				Heath Street (1)	..	..	8	32	Lansdown Street	..	8
Foundry Road		2		Heath Street South	..	..	5		Larches Street (1)	..	7
Fowler Street	1			Heaton Street	..	..	1	4	Latimer Street	..	1
Fox Street	1	8		Heleena Street	..	..	9		Latimer Street South (1)	..	21
Francis Road	1			Heneage Street	..	..	13	28	Lawley Street	..	33
Francis Street	11	21		Henley Street	..	..	1	5	Lawrence Street	..	6
Frankfort Street	2	3		Henn Street	..	..	1		Lease Lane	..	6
Franklin Street				Henn's Walk	..	..	1	1	Ledsam Street	..	15
Frank Street	1	4		Henrietta Street	..	..	9		Lee Bank Road	..	22
Frederick Road	5			Henry Street	..	..	11	20	Lee Crescent	..	3
Frederick Street	4			Herbert Road (1)	..	..	7	13	Lee Mount	..	2
Freeman Road	4	5		Hickman Road	..	..			Leek Street	..	
Freeman Street	2			Hick Square	..	..	5	6	Lees Street	..	1
Freeth Street	6	6		Hick Street	..	..	5	6	Legge Lane	..	5
Friston Street (1)	4	7		Highbfield Road	..	..	1	1	Legg Street	..	8
G				Highgate Lane	..	..	5		Lench Street	..	3
Galton Street		2		Highgate Place	..	..			Lemon Street(3)	..	11
Garbett Street	6	12		Highgate Street (1)	..	..	4	13	Leopold Street	..	18
Garrison Lane	3	9		High Park Street	..	..	5	4	Lichfield Street	..	15
Garrison Street	5	15		High Street (1)	..	..	5	10	Lilly Green	..	3
Gas Street	2			High Street, Deritend	..	..	8	34	Lingard Street	..	3
Geach Street (1)	3	11		Hill Street (1)	..	..	3	14	Lionel Street (1)	..	8
Gee Street	4	2		Hingeston Street (2)	..	..	8	18	Lister Street	..	4
Gem Street	5			Hol Moor Lane	..	..	3	12	Little Ann Street	..	4
George Road	1			Hockley Hill	..	..	1	3	Little Bari Street	..	2
George Street	5	9		Hockley Pool Rond	..	..	1	3	Little Bow Street	..	2
George Street, West	5	7		Hockley Street	..	..	2	11	Little Broom Street	..	1
Gibb Street	1			Holborn Hill	..	..	2	11	Little Cannon Street	..	1
Gladstone Road	2			Holland Street	..	..	7		Little Charles Street	..	3
Glebe Passage				Holliday Street (6)	..	..	5	14	Little Cherry Street	..	
Glebe Street	2	6		Hollier Street	..	..	1	13	Little Edward Street	..	2
Gloucester Street				Holloway Head	..	..	4	19	Little Francis Street	..	1
Glover's Road				Holly Road	..	..			Little Green Lane	..	10
Glover's Street	6	11		Holt Street (1)	..	..	3	17	Little Hill Street	..	1
Godwin Street	4	9		Hooper Street (1)	..	..	3		Little King Street	..	1
Golden Hillock Road		2		Hope St. (St. Martin's) (1)	..	..	2	22	Little Shadwell Street	..	1
Gooch Street (1)	11	20		Hope Street (All Saints)	..	..	2		Liverpool Street (1)	..	6
Goode Street	1	3		Horse Fair	..	..	2	4	Livery Street (4)	..	21
Goodrick Street	1	1		Hospital Street (3)	..	..	7	27	Lloyd Street	..	1
Gopsall Street	1	4		Howard Place	..	..	2	9	Lodge Road (3)	..	24
Gosta Green	5			Howard Street (2)	..	..	1	4	Lombard Street	..	8
Gongh Road	1	8		Howe Street	..	..	7	17	London Prentice Street	..	7
Gongh Street	1	5		Hubert Street	..	..			Long Acre	..	9
Graham Street	9	4		Hunter's Lane	..	..			Longmore Street	..	2
Grange Road	2	6		Hunter's Vale	..	..			Long Street	..	13
Grantham Road				Hurst Street	..	..	6	17	Lord Street	..	10
Grant Street	2	6		Ibbton Street	..	..	1		Louisa Street	..	2
Granville Street	4	5		Hyde Road	..	..	2	2	Loveday Street (1)	..	12
Great Barr Street		20		Hylton Street	..	..	1		Love Lane	..	2
Great Brook Street	2	31		I					Lower Camden Street	..	13
Great Charles Street	2	9		Icknield Port Road	2	..	21	37	Lower Dartmouth Street	..	4
Great Colmore Street	7	43		Icknield Square	..	..	9	17	Lower Darwin Street	..	4
Great Francis Street	8	31		Icknield Street East (3)	..	..	6	30	Lower Essex Street (2)	..	16
Great Hampton Row	4	21		Icknield Street West (1)	4	..	17		Lower Fazeley Street	..	4
Great Hampton Street	4	21		Inge Street	..	..	4	12	Lower Henry Street	..	
Great King Street	6	25		Ingleby Street (1)	..	..	4	13	Lower Hospital Street	..	4
Great Lister Street	1t	31		Inkerman Street	..	..	2	14	Lower Burst Street	..	15
Great Queen Street				Irving Street	2	..	9	37			
Great Russell Street (1)	9	29		Islington	..	..	1	5			
Great Tindal Street (1)	3	3		Islington Row	..	..	1	1			
Greaves' Court				Ivy Lane	..	..	2	1			

STREETS.			STREETS.			STREETS.		
	Zymotic Diseases	Other Diseases		Zymotic Diseases	Other Diseases		Zymotic Diseases	Other Diseases
Smith Street, St. George's	9	21	Trinity Terrace	..	..	Wharf Street, Deritend	..	1
Smith Street, Duddleston	..	5	Turner Street	..	1	Wharf Street, Duddleston	1	3
Snape Street	..	1	Tyndall Street	..	8	Wharton Street	..	1
Snow Hill (1)	..	13	U			Wheeler Street	..	8 23
Soho Road	..	2 10	Unett Street	1	..	Wheeler's Lane	..	1 2
Somerset Road	Union Passage	..	2	Wheeler's Road	..	5
Somerset Street	..	4	Union Street	..	..	White Lion Passage	..	..
South Road	..	8	Union Terrace	..	..	Whitmore Road	..	5
Spark Street	..	1	Upper Dean Street	..	1	Whitmore Street(1)	..	2 4
Speaking Stile Walk	..	1	Upper Gough Street(1)	..	1	Whittall Street	..	1 4
Speedwell Road	Upper Highgate Street	..	1	Wiggin Street	..	..
Spencer Street(1)	..	3 11	Upper Hockley Street	..	2	William Edward Street	..	2 11
Spiceal Street	Upper Hospital Street(1)	4	15	William Henry Street	..	2 3
Spon Terrace	Upper Marshall Street	..	1	William St., St. Thomas'(1)	..	18 28
Spooner Street	..	6	Upper Mill Lane	..	..	Williams Street, Deritend	1	2
Springfield Street West	3	11	Upper Priory (1)	..	1	William Street North	..	3
Spring Hill	..	9 15	Upper Ryland Road	..	4	Willis Street	..	2 10
Spring Hill Passage(1)	2	..	Upper Trinity Street	..	9 11	Wilton Street	..	5
Spring Street	..	2 9	Upper Windsor Street	..	5 17	Windmill Street	..	1 6
Spring Vale	..	1	V	..	..	Windsor Street	..	1
Stafford Street (1)	..	8 13	Vale Street	..	1	Winston Green Road	..	4 9
Staniforth Street (1)	10	16	Verna Road (1)	..	2 10	Winston Street	..	1 7
Stephenson Lane	..	4 20	Vaughton Street (1)	..	11 17	Witton Street	..	4 4
Stephenson Place	Vaughton Street South	..	2 3	Woodcock Street	..	4 12
Steward Street	..	2 11	Vauxhall Grove	..	..	Wood Street, St. Thomas'	..	5
Stewart Street	Vauxhall Road	..	8 16	Wood Street, Ladywood	1	..
Stoke Street	..	2 6	Vauxhall Street	..	4 5	Worcester Street	..	1
Stone Yard	..	2 1	Vere Street	..	4 13	Worcester Wharf (1)	..	1
Stoney Lane	Vicarage Road	..	2	Wordsworth Road	..	2
Stour Street (1)	..	5 11	Victoria Grove	..	1 1	Wrentham Street	..	3 13
Stratford Place	..	1	Victoria Street	..	..	Wright Street	..	3 6
Stratford Road	..	11	Villa Street	..	6 6	Wrottesley Street	..	..
Stratford Street	..	6	Villiers Street	..	..	Wyndham Road	..	1
Suffolk Street	..	10 22	Vine Street	..	1 1	Wynn Street (1)	..	3 9
Summer Hill	..	4 3	Vittoria Street	..	2 4	X	..	..
Summer Hill Street	..	4	Vyse Street	..	1 4	Y	..	..
Summer Hill Terrace (1)	W	..	..	Yew Tree Road	..	1
Summer Lane	..	11 51	Walter Street	..	..	York Passage	..	..
Summer Row	..	1 1	Ward Street (1)	..	2 7	York Road	..	..
Summer St., Edgbaston	5	6	Warner Street	..	..	York Street	..	2 5
Summer St., St. Mrtin's(1)	4	5	Warstone Lane (1)	..	6 15	Z	..	..
Sun Street	..	6 5	Warstone Parade East	..	..	ADDENDA.	..	..
Sun Street West	..	3	Warstone Parade West	..	..	Birmingham and Worcester Canal	..	1
Sutton Street	..	1 1	Warwick House Passage	..	..	Birmingham and Fazeley Canal ..	..	4
Swallow Freet	..	1 3	Warwick Street	..	6 11	Birmingham and Warwick Canal ..	..	2
Swan Passage	..	1	Washington Street	..	2 3	Old Birmingham Canal	..	7
T	Waterloo Street	..	..	New Street Station	..	2
Talbot Street	..	4 11	Water Street	..	2 11	Rotton Park Reservoir	..	2
Talfourd Street	..	2 10	Waterworks Road	..	2 2	Park Mill Pool	..	1
Tanter Street (1)	..	7 15	Watery Lane	..	15 35	Edgbaston Station	..	1
Taylor Street	..	1 4	Weaman Row	..	1	AT INSTITUTIONS.	..	..
Temple Field Street	..	2 2	Weaman Street	..	5 22	General Hospital (1)	..	5 181
Temple Row	..	1	Wellesley Street	..	1 2	Queen's Hospital	..	3 122
Temple Row West	Wellington Passage	..	..	Children's Hospital	..	24 42
Temple Street	..	2	Wellington Road	..	..	Workhouse (1)	..	220 429
Tenby Street	..	3	Wellington Street	..	2 2	Asylum	..	5 52
Tenby Street North	..	2	Well Lane	..	..	Gaol	..	1 1
Tennant Street	..	7 17	Well Street (3)	..	7 15	Women's Hospital, Crescent	..	7
Theodore Street	..	7 7	Westbourne Road	..	2	Blue Coat School	..	1 1
Thinble Mill Lane	..	4 4	Western Road	..	..	Boro' Small-pox Hospital	..	4
Thomas Street, St. Mary's	2	5	Westfield Road	..	..	Small Pox Hospital	..	40
Thomas Street, Deritend	4	6	Westley Street	..	2 1	TOTALS	..	2632 7013
Thorp Street (1)	..	5 5	Weston Street	..	1 1	Grand Total	..	9,665
Tillingham Street	..	1	Wharf Lane	..	3 3			
Tiudal Street (2)	..	6 10	Wharf St., St. Thomas'(2)	11	14			
Tonk Street (1)	..	1 2						
Tower Street (1)	..	6 26						
Trafalgar Road						
Trent Street	..	3 7						

NOTE. The numbers in brackets refer to cases of Small Pox which, having occurred in the Streets to which the numerals are appended, have been subsequently removed to the Small Pox Infirmary, and there ended fatally. Each of these numbers is therefore to be added to that opposite to it in the first column.

BOROUGH ANALYST'S LABORATORY,
PUBLIC OFFICE, BIRMINGHAM,

May 19th, 1875.

TO THE SANITARY COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I beg to present my Annual Report upon the articles of food and drink, submitted to and analysed by me during the year 1874, under the provisions of the Act for the prevention of Adulteration of Food and Drink and of Drugs.

The samples examined were all presented to me through and by the Inspector, and were 79 in number.

The nature of the articles, their adulteration and other particulars are given in the following statement:—

No.	Date.	Articles.	Milk	... Adulterated with 20% water. Private purchaser. No prosecution.	Remarks.
87 ...	Jan. 3 ...		"	... Adulterated with 20% water, and cream abstracted. Fined, 5s. and costs.	
88 ...	" 15 ...		"	... Slightly adulterated with water. No prosecution.	
89 ...	" 15 ...		"	... Adulterated with 25% water, cream abstracted, and colouring matter added. Fined, 5s. and costs.	
90 ...	" 15 ...		"	... Slightly adulterated with water. No prosecution.	
91 ...	" 15 ...		"	... Adulterated with 11·5% water, and cream abstracted. Paid costs.	
92 ...	" 15 ...		"	... Genuine.	
93 ...	" 15 ...		"	... Adulterated with 15% water. Private purchaser. No prosecution.	
94 ...	" 17 ...		"	... Genuine.	
95 ...	" 27 ...		"	... Adulterated with 14% water and skimmed milk. Fined, 30s. and costs	
96 ...	" 27 ...		"	... Adulterated with 19% water and skimmed milk. Fined, 30s. and costs.	
97 ...	" 27 ...		"	... Genuine.	
98 ...	" 27 ...		"	... Adulterated with 22% water and skimmed milk. Fined, 30s. and costs.	
99 ...	" 28 ...		"	... Adulterated with 13% water and skimmed milk. Fined, 20s. and costs.	
100 ...	" 28 ...		"	... Genuine.	
101 ...	" 28 ...		"	... Adulterated with 60% water. Fined, 2s. 6d. and costs.	
102 ...	" 29 ...		"	... Adulterated with 30% water. Fined, " " "	
103 ...	" 29 ...		"	... Adulterated with 29% water. Fined, " " "	
104 ...	" 29 ...		"	... Genuine.	
105 ...	" 30 ...		"	... Adulterated with 30% water. Fined, " " "	
106 ...	" 30 ...		"	... Genuine.	
107 ...	" 30 ..		"	... Adulterated with 30% water. Fined, " " "	
108 ...	" 30 ..		"	... Adulterated with 29% water. Fined, " " "	
109 ...	Feb. 25 ...	Beer	"	... Genuine.	
110 ...	" 25 ...	Milk	"	... Adulterated with skimmed milk. Fined, 20s. and costs.	
111 ...	" 25 ...	Beer	"	... Genuine.	
112 ...	" 25 ...	Milk	"	... Adulterated with skimmed milk. Fined, 10s. and costs.	
113 ...	" 25 ...	Beer	"	... Genuine.	
114 ...	" 25 ...	"	"	... "	
115 ...	" 25 ...	"	"	... "	

116 ... Mar. 9 ... Mustard	...	Adulterated with flour and turmeric. Fined, 2s. 6d. and costs.
117 ... " 9 ... "	...	Genuine.
118 ... " 9 ... "	...	Adulterated with flour and turmeric. Labelled "An Adumixture." Case dismissed.
119 ... " 9 ... "	...	Genuine.
120 ... " 9 ... "	...	Adulterated with flour and turmeric. Fined, 2s. 6d. and costs.
121 ... " 9 ... "	...	Genuine.
122 ... " 9 ... "	...	"
123 ... " 9 ... "	...	"
124 ... " 28 ... Butter	...	Adulterated with foreign fat and water. Fined, 5s. and costs.
125 ... " 28 ... "	...	Adulterated with foreign fat and water. Vendor prosecuted. Case dismissed.
126 ... April 25 ... Coffee	...	Genuine.
127 ... May 1 ... Green Tea	...	"
128 ... " 1 ... Black Tea	...	Adulterated with plumbago and lie tea. Fined, 40s. and costs.
129 ... " 1 ... "	...	Partly faced with plumbago. Contains a few magnetic particles.
130 ... " 1 ... "	...	Partly faced with plumbago. Contains a few magnetic particles.
131 ... June 8 ... Milk	...	Adulterated with 20% water. Private purchaser. No prosecution.
132 ... " 18 ... "	...	Adulterated with 20% water. Fined, 60s. and costs.
133 ... " 18 ... "	...	" 15% " " 40s. " "
134 ... " 18 ... "	...	Genuine.
135 ... " 19 ... Mustard	...	"
136 ... " 19 ... "	...	"
137 ... " 19 ... Black Tea	...	Adulterated with plumbago, magnetic particles, and lie tea. Fined, 5s. and costs.
138 ... " 19 ... Milk	...	Adulterated with 16% water. Fined, 5s. and costs.
139 ... " 19 ... "	...	Genuine.
140 ... " 19 ... "	...	Adulterated with 50% skimmed milk. Fined, 20s. and costs.
141 ... " 20 ... Butter	...	Slightly rancid, but genuine.
142 ... July 7 ... Milk	...	Adulterated with water, and cream abstracted to the extent of 11%.
143 ... " 22 ... Pepper	...	Genuine.
144 ... " 22 ... Tea (Black)	...	"
145 ... " 22 ... Pepper	"	"
146 ... " 22 ... Wine (Sherry)	...	A home-made article without the properties of true Sherry.
147 ... " 27 ... Milk	...	Adulterated with about 10% of water. Private purchaser and no prosecution.
148 ... Aug. 20 ... "	...	Adulterated with 8% water, and cream abstracted. Fined, 5s. and costs.
149 ... " 20 ... Flour	...	Genuine.
150 ... " 20 ... Bread	...	"
151 ... Sept. 18 ... Milk	...	Cream abstracted to the extent of 40%. Vendor prosecuted, but case dismissed.
152 ... " 18 ... "	...	Genuine.
153 ... " 18 ... "	...	Adulterated with 5% water, and cream abstracted.
154 ... " 22 ... "	...	Genuine.
155 ... " 22 ... "	...	"
156 ... " 22 ... "	...	"
157 ... " 25 ... Pickles	...	Genuine and pure.
158 ... " 25 ... Sweets	...	" " "
159 ... " 28 ... Whiskey	...	Genuine, but watered. Strength about 14° under proof.
160 ... " 28 ... Gin	...	Very weak, 40° under proof.
161 ... " 28 ... Whiskey	...	Genuine, 10° " "
162 ... " 28 ... Gin	...	Very weak, 50° " "
163 ... Oct. 27 ... Sweets	...	Adulterated with chromate of lead. Fined, 5s. and costs.
164 ... Nov. 6 ... "	...	" " " " " " "
165 ... " 11 ... "	...	" " " " " " "

Classified in groups they stand as follows :—

							40 Samples.
Milk	...	...	...	...	...	...	5 "
Beer	...	...	...	...	...	...	10 "
Mustard	...	...	...	...	...	...	3 "
Butter	...	...	...	...	...	...	1 "
Coffee	...	...	...	...	...	...	6 "
Tea	...	...	...	...	...	...	2 "
Pepper	...	...	...	...	...	...	1 "
Sherry	...	...	...	...	...	...	1 "
Flour	...	...	...	...	...	...	1 "
Pickles	...	...	...	...	...	...	1 "
Sweets	...	...	...	...	...	...	4 "
Whiskey	...	...	...	...	...	...	2 "
Gin ...	...	...	...	...	...	...	2 "
Bread	...	...	...	...	...	...	1 "

Out of the 40 samples of milk, 13 were genuine, the remaining 27 had either been adulterated with water or skimmed milk.

The five samples of beer were genuine.

Of the 10 samples of mustard, three were adulterated with flour and turmeric, while the remainder were genuine.

Two of the three samples of butter were adulterated with foreign fat and water, and the other sample, though genuine, was rancid.

The sample of coffee was genuine.

The six samples of tea consisted of two genuine and four adulterated samples. The substances most used as adulterants were plumbago, magnetic particles, and "lie" tea.

Both the samples of pepper were genuine.

The sample of sherry had none of the properties of true sherry.

The bread, flour, and pickles, were all unadulterated and of good quality.

Three of the samples of sweets were adulterated with chromate of lead, which is a very dangerous substance, and, I am glad to say, is now very rarely used ; one was genuine and perfectly harmless.

The samples of whiskey and gin were genuine, if the addition of large quantities of water be disregarded ; they were considerably diluted, but more especially the gin, one sample of which was as much as 50 degrees under proof.

Of the staple articles of food, milk appears at present to be the one most generally tampered with. This, however, is not the case to so serious an extent as formerly, and instead of the practice of watering, which used to be the one almost exclusively employed, that of adulterating new milk with skimmed milk, and that of abstracting a part of the cream, are now much in vogue. It is to be feared that this arises in a great measure from the view taken by some tribunals that abstraction is not adulteration, a view from which I entirely dissent.

The other principal articles of food, bread and flour are almost universally found unadulterated and of good quality, and it cannot be doubted that the operation of the Adulteration Act has been highly beneficial.

I remain,

Gentlemen,

Your obedient Servant,

ALFRED HILL, M.D.,
Borough Analyst.

